

What is claimed is:

1. **(Currently Amended)** A process for recovering a pure soda ash product from dilute sodium carbonate bearing streams ~~too dilute to be efficiently recoverable~~ ~~using by~~ a sodium monohydrate process comprising:
 - a) combining a plurality of sodium carbonate bearing streams in a proportion to suitably feed a sodium carbonate decahydrate process ~~by introducing a waste stream at a plurality of places in the recovery process;~~
 - b) neutralizing and thereby reducing the bicarbonate concentration of said combined streams by a ~~means selected from a treatment~~ selected from the group consisting of (i) a neutralizing agent, (ii) decarbonizing, (iii) diluting with the addition of a more highly concentrated sodium carbonate bearing stream, and (iv) a combination of neutralizing, decarbonizing, and diluting;
 - c) crystallizing sodium salts from said combined streams to form sodium carbonate decahydrate;
 - d) steam purging and recycling the streams to accumulated impurities from steps a through c;
 - e) utilizing the decahydrate from step d to concentrate a less concentrated sodium salt blend;
 - f) crystallizing a desired level of sodium carbonate from the sodium carbonate decahydrate of step c; and
 - g) wasting purge stream from step d to surface evaporation ponds to avoid the costs and hazards associated with underground disposal methods.
2. **(Currently Amended)** The process of Claim 1 wherein the purge steam from step d is utilized to effect a processing step selected from the group consisting of (i) concentrating a less concentrated sodium carbonate stream, (ii) feeding the sodium carbonate decahydrate unit of step a, and (iii) both concentrating a less concentrated sodium carbonate stream and feeding a sodium carbonate decahydrate unit.
3. **(Currently Amended)** A process for producing sodium carbonate ~~by withdrawing~~ ~~calcium~~ sodium carbonate from the neutralization by-product of step b of Claim 1.
4. **(Currently Amended)** A process according to Claim 1 wherein the sodium carbonate bearing streams include one or more of streams selected from mine water, pond water, other sodium carbonate bearing streams such as containment

basins used to comply with environmental liquid discharge permits, and other process waste streams with concentrations less than about 18% sodium carbonate.

5. (Currently Amended) A process according to Claim 1 wherein the sodium carbonate bearing streams include one or more of streams selected from pond water, enriched warm water introduced to impound sodium decahydrate deposits with the purpose of enriching said warm water in sodium carbonate concentration by melting and dissolving said deposits, streams enriched in sodium carbonate concentration by mechanically mining said impounded sodium decahydrate deposits, sodium carbonate monohydrate purge streams and other sodium carbonate evaporator/crystallizer purge streams with concentrations greater than about 18% sodium carbonate.
6. (Currently Amended) A process according to claim 1 wherein said sodium carbonate bearing streams are enriched in sodium carbonate concentration by one or a combination of steps that includes:
 - a) combining streams of lesser sodium carbonate concentration with streams of higher sodium carbonate concentrations;
 - b) enriching streams of lesser sodium carbonate concentration with decahydrate crystals;
 - c) evaporating water from the sodium carbonate bearing streams by means using prior art methods selected from third effect of a triple effect crystallizer train, cooling towers, evaporator cooler, and air cooled spray evaporator/crystallizer; and a combination of the above.
7. (Currently Amended) A process according to Claim 1 wherein said the dilute sodium carbonate bearing streams are enriched in sodium carbonate concentration to crystallize the sodium carbonate salt desired that includes the steps of:
 - a) combining streams of lesser sodium carbonate concentration with streams of higher sodium carbonate concentrations;
 - b) enriching streams of the lesser sodium carbonate concentration with decahydrate crystals;
 - c) evaporating water from the sodium carbonate bearing streams using a method selected from third effect of a triple effect crystallizer train, cooling towers,

- evaporator cooler, air cooled spray evaporator/crystallizer; and a combination of said methods; and
- d) a combination of the above and purging a portion of the mother liquid from the enriched stream b or combined stream a separated from the crystals prior to recycling said liquor.
8. (Previously Amended) A process according to claim 1 wherein the crystallized sodium carbonate decahydrate is used to concentrate sodium carbonate in streams feeding other sodium carbonate salt processes.
9. (Previously Amended) A process according to claim 2 wherein the sodium carbonate bearing streams are depleted in sodium bicarbonate concentration are used in the production of medium or light density sodium carbonate.
10. (Currently Amended) A process that extends the life cycle of surface evaporation ponds comprising feeding to said pond the streams from step g of claim 1, wherein the concentration of a stream fed to ponds is reduced by about one half by processing according to claim 1.
11. (Previously Amended) A process that substantially reduces the hazards of accumulated sodium carbonate waste stream disposals comprising treating said waste stream according to the process of Claim 1.